

later found in Hope Gardens, Jamaica, by Eug. Mayor, and verified by him (Mem. Soc. Neuch. Sc. Nat. 5: 577. 1913). Material representing this species of *Uredo* does not yet occur in any American collection. Greatly to my surprise the two West Indian collections detected by Mrs. Chase, one being from Jamaica where Mayor made his collection, are wholly unlike the species described by Sydow, and in fact appear to represent one that is undescribed and very distinctive. We take pleasure in naming this new species in honor of Mrs. Chase as a slight recognition of her devotion to botanical investigations, her eminent services to agrostology, and her disinterested assistance freely given to workers in other lines of research. The species appears to be most closely related to *Puccinia polysora* Underw., on *Tripsacum*, which has larger urediniospores, however, with five instead of four pores, and has not yet been found in the West Indies. The description of *Uredo Anthephorae* given by Sydow and Mayor, if one may venture a guess, indicates that the form may belong to *Puccinia Cenchri* Diet. & Holw., which occurs in the West Indies on *Cenchrus*, but is not reported on *Anthephora*.

***Uredo quinqueporula* sp. nov.**

II. Uredinia amphigenous, scattered, few, elliptical to oblong-linear, 0.5–2.5 mm. long, early naked, chestnut-brown; paraphyses none; urediniospores ellipsoid or oblong-ellipsoid, 19–24 by 25–33  $\mu$ ; wall moderately thick, 1.5–2.5  $\mu$ , golden- to cinnamon-brown, echinulate, the pores 5, sometimes 4, equatorial.

On *Torresia macrophylla* (Thurb.) Hitchc. (*Savastana macrophylla* Beal, *Hierochloa macrophylla* Thurb.), Glendale, Oregon, July 17, 1914, H. S. Jackson 1411. This non-paraphysate grass rust is especially noteworthy in having the larger part of its urediniospores equatorially five-pored.

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SHORTER NOTES

EQUISETUM IN THE FLORISSANT MIOCENE. During years of collecting from the Miocene shales at Florissant, Colorado, we failed to find any material of *Equisetum*, although it could hardly

be doubted that it was present in the flora. A few years ago, however, Mr. Willard Rusk was so fortunate as to find a fossil *Equisetum* at Station 13B, Florissant. Unfortunately the sheaths were lost prior to preservation, but the fragment of a fertile stem, showing two and a half joints, is sufficiently characteristic for description.

***Equisetum florissantense* n. sp.**

Fertile stem with joints extremely robust and short, 11.5 mm. long and 13.5 mm. broad; a black or dark ring below articulation of sheath; furrows close and numerous, 25 in lateral view, presumably 50 in all, the ridges minutely longitudinally striate, but not tuberculate.

Related to *E. canaliculatum* Knowlton, from the Yellowstone, but apparently distinct by the short joints, which appear to be mature. Among the living species it may be compared with *E. robustum* and *E. hyemale*.



FIG. 1. *Equisetum florissantense* Cockerell.

Seward\* remarks that "attempts to define strictly the specific characters of fossil Equisetaceous stems must necessarily result in provisional grouping as regards the majority of specimens, which are too incomplete to furnish adequate taxonomic data." The general type of *Equisetum*, as described by Seward and Lignier in numerous species as far back as the Jurassic, does not seem to have undergone any marked modification up to the present day. Competition with the modern flora has doubtless

\* Jurassic Plants from Chinese Dzungaria, Mém. Com. Geol. (Petrograd), 1911, p. 35.

reduced the number of specific types and individuals of *Equisetum*, but has not, apparently, led to any progressive changes. The species from different geological horizons are probably distinct, but owe their distinctness merely to a shuffling of characters presenting new combinations of size, length of internodes, number of furrows, etc.

T. D. A. COCKERELL

## PROCEEDINGS OF THE CLUB

MAY 26, 1915

The meeting was held in the laboratory of the New York Botanical Garden at 3:30 P.M., President Harper presiding. Twenty persons were present.

The minutes of meetings held April 28 and May 4 were read and approved.

Dr. Barnhart proposed Mr. Frank J. McCarthy, 311 E. 188th St., N. Y. City, for membership, and Dr. M. Levine proposed Miss Louise Kramer, 403 W. 49th St., N. Y. City, Mr. William Downer, 239 Bedford Ave., Brooklyn and Mr. Cullen Adlerblum, 1652 Mt. Hope Ave., Bronx, N. Y. These names were referred to the Committee on Membership.

Mrs. Britton read a communication from M. E. Husnot regarding the temporary suspension of publication of *Revue Bryologique*. The president directed that the exchange relations be continued.

Dr. M. Levine spoke of the advisability of establishing a new class of members to be known as associate members, who should enjoy the privileges of full membership except that of receiving the publications of the Club. Dr. Barnhart and others followed with further discussion of the subject. It was moved to appoint a committee of three to consider the matter. This motion was carried. The president then appointed as such committee Dr. M. Levine, Dr. Marshall A. Howe and Mr. Norman Taylor.

The field committee was authorized to accept into provisional membership subject to the subsequent ratification of the Club persons desiring to become members during the summer months.

Mr. Frank J. McCarthy was elected to membership.